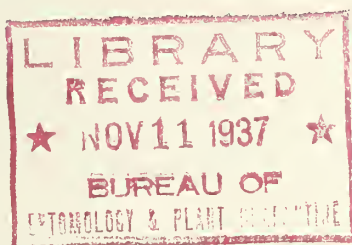


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THE INSECT PEST SURVEY
BULLETIN



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THE MORE IMPORTANT RECORDS FOR OCTOBER

Grasshopper egg surveys have been started in most of the States concerned in the great outbreak of the past summer. Eggs are being found in the anticipated abundance. Egg laying has been somewhat delayed and continues in the southern part of the territory.

An egg survey of the Mormon cricket in Nevada has been completed. Eggs are very abundant in the north, diminishing in numbers southward. A report from Montana indicates that the insect has spread from focal areas scattered over much of the State.

The hessian fly was reported as occurring in some early seeded wheat in Missouri and in southeastern Kansas.

Owing to dry, warm weather favorable to chinch bug development, the insect built up populations rapidly and has entered hibernation quarters in great abundance in Illinois and Kansas.

The velvetbean caterpillar is abundant and destructive in Florida. It was also reported from Louisiana.

The apple maggot showed up in unexpected abundance in an orchard in central West Virginia where it was reported 10 years ago.

The grape berry moth was reported in unusual abundance along Lake Erie in Ohio and in southwestern Michigan.

Infestations of the walnut husk fly have been found in Orange County, Calif., extending the infested territory somewhat to the west.

The California red scale is causing serious injury to citrus in the southern tip of Texas. The scale was also reported in great abundance from Los Angeles County, Calif.

The vegetable weevil is coming out of aestivation and attacking truck crops in the Gulf States.

The northern mole cricket was reported to be very abundant in Massachu-

setts, where it severely damaged potato tubers. This damage seems to be a little extraordinary so far north.

Reports from Minnesota and Iowa indicate that the squash bug is more abundant than usual this fall.

Injury to the immature pods of peanuts by larvae of the spotted cucumber beetle in Virginia was reported in September.

The tobacco worm continued its depredations into late fall, serious injury being reported from Connecticut.

Late season conditions have been very favorable for boll weevil development and reports from South Carolina, Georgia, Florida, Mississippi, Louisiana, and eastern Texas indicate that weevils are much more abundant in the fields than for the past several years. Abundant rains have produced a late growth of squares and young bolls in which the weevils have continued to develop.

GENERAL FEEDERS

GRASSHOPPERS (Acrididae)

Illinois. W. P. Flint (October 21): We have started the egg survey, and indications are that eggs are much less abundant than they were in the fall of 1936. So little territory has been covered that no accurate statement as to the number of eggs can be made. Nearly all adult grasshoppers have been killed by the heavy rains and low temperatures. In most sections the number of adults was much less than in the fall of 1936.

Michigan. R. Hutson (October 22): The fall survey discloses an unusual abundance of eggs wherever hoppers were numerous during the summer. The infestation is spotty, some areas carrying normal populations and many small areas and a few large ones carrying heavy populations. Melanoplus femur-rubrum Deg. occurs throughout southern half of the Lower Peninsula in fence rows, ditchbanks, and similar locations. North of the Muskegon-Bay City line M. mexicanus Sauss. and Ageneotettix deorum Scudd. are the predominating species on sandy soils in heavy infestations. M. mexicanus is still the predominant species in northern counties of the Lower and Upper Peninsulas. Camnula pellucida Scudd. staged a strong comeback from last year and the eggs of this species are readily found in all areas where it occurs in more than normal numbers, especially numerous in the vicinity of Perkins, Watson, and Trenary.

Minnesota. A. G. Ruggles (October 18): The egg survey is on in full force. Eggs of M. femur-rubrum are abundant in some of the southern counties.

Missouri. L. Haseman (October 22): In central Missouri our first killing frost came on October 10 to 12. Since the first frost in central Missouri there has been no further appreciable frost. This being the case, grasshoppers, particularly M. differentialis Thos., and the less migratory (M. mexicanus), are still laying eggs on warm days. Locally, most of the M. differentialis have now deposited their eggs and are gone, but considerable numbers of M. mexicanus are present and the females contain mature eggs. In places in central Missouri we are finding more eggs of M. differentialis than we have ever seen in past years and far more than there were a year ago.

Nebraska. M. H. Swenk (October 20): Grasshoppers were largely engaged in oviposition during the period September 20 to October 20. M. differentialis and M. bivittatus Say laid their eggs at the normal time in September, but the ovipositing of M. mexicanus was somewhat delayed. The total egg deposition for all injurious species bids fair to equal or exceed that of the fall of 1936.

Oklahoma. C. F. Stiles (October 22): Grasshoppers have done considerable damage to the fall-sown wheat and the fall seedings of alfalfa throughout the central and western parts of Oklahoma. The species most common

are M. differentialis and M. mexicanus. Practically all of the M. bivittatus have disappeared. There is also quite a mixture of various species scattered throughout the State. M. mexicanus is, no doubt, the most numerous, and apparently we have had a second generation in some parts of the State. Much poisoning has been done during the last 3 weeks.

Colorado. C. R. Jones (October 21): From the present egg survey, it appears that we will be visited by a tremendous outbreak of hoppers next year and the migratory form, Dissosteira longipennis Thos., will appear in counties not previously infested.

Nevada. G. G. Schweis (October 20): A grasshopper egg survey was completed during the month of September and reveals that over most of the area a normal population of hoppers will occur next year, with indications in a few restricted districts that the populations will be heavy enough to cause severe damage.

Utah. G. F. Knowlton (October 9): Grasshoppers are still abundant and damaging alfalfa and other crops at Liberty, Eden, and Huntsville, in Weber County. Egg laying is well along in most parts of northern Utah, and grasshoppers are decreasingly abundant. (October 12): They appear to be more abundant in Cache, Carbon, Daggett, Davis, Duchesne, Grand, Morgan, Uintah, and Weber Counties than in 1936. Populations were somewhat lower in Utah County, in general.

MORMON CRICKET (Anabrus simplex Hald.)

Montana. H. B. Mills (October 21): Although generally kept out of cultivated fields last summer, with injury reduced to a minimum, the area infested increased nearly 60 percent over last year, with the focal areas on the southeastern State line from Carbon to Powder River Counties, in the vicinity of the Highwood Mountains, the Little Rockies and the Bearpaw Mountains, and the area in western Lake and eastern Sanders Counties. They have been reported from most mountainous sections of the State in some numbers and probably every county contains these insects.

Nevada. G. G. Schweis (October 20): An egg survey was completed recently and a heavy deposition of eggs was found in Elko, Humboldt, Eureka, and Lander Counties, with a lesser number in White Pine, Pershing, and Washoe Counties. All indications point to a heavy infestation of these insects in the first-named counties.

FULLER'S ROSE BEETLE (Pantomorus godmani Crotch)

Georgia. C. H. Alden (October 18): Hundreds of these beetles have been found in the last few weeks at Cornelia, feeding on peach foliage. They are more numerous than they have been in years in this section.

O. I. Snapp (October 21): This insect is abundant as usual at Fort Valley, central Georgia, feeding on the foliage of peach trees.

Alabama. J. M. Robinson (October 20): Fuller's rose beetle is very abundant over the State and was reported as ragging shrubbery foliage at Kinston on October 8.

JAPANESE BEETLE (Popillia japonica Newm.)

Virginia. H. G. Walker and L. D. Anderson (October 26): The Japanese beetle appears to be on the increase at the Virginia Truck Experiment Station near Norfolk. Two beetles were caught in two traps in 1935, 8 beetles were caught in 12 traps in 1936, and 50 beetles were caught in 26 traps in 1937.

A SCARABAEID (Ochrosidia villosa Burm.)

Connecticut. W. E. Britton (October 22): A lawn damaged by grubs has just been reported from Southport. Last year severe damage occurred at Greenwich and this season the insect has caused similar damage in East Norwalk.

BEET WEBWORM (Loxostege sticticalis L.)

Utah. G. F. Knowlton (October 7): Occurs on Russian-thistle and in cultivated districts in every county of Utah. It was generally common, and the moths abundant during much of the 1937 season.

WHITE-LINED SPHINX (Sphinx lineata F.)

Minnesota. A. G. Ruggles (October 18): Adults extremely numerous until frosts began.

NEVADA BUCK MOTH (Hemileuca nevadensis Stretch.)

Nebraska. M. H. Swenk (October 20): Specimens for identification were sent in from Keith County on October 8.

A CUTWORM (Feltia venerabilis Walk.)

Maine. H. B. Peirson (October 19): Heavy flights of this moth occurred on September 20 on the coast at Bar Harbor.

MONARCH BUTTERFLY (Danaus menippe Hbn.)

Maryland. E. N. Cory (October 8): Monarch butterflies began to assemble at Piney Point, Saint Marys County, on October 7. On the morning of October 8 it was cold and windy and very few butterflies were in evidence, but as the day progressed and the temperature rose, they reappeared until around 500 were in the neighborhood clustering on various trees preparatory to clustering for the night. The specimens were sprayed with a green dye in the hope that they may be recorded from this cluster at points in their southern travel.

PIPEVINE CATERPILLAR (Papilio philenor L.)

Massachusetts. A. I. Bourne (October 19): Much more abundant than usual. One correspondent stated that she normally found 2 or 3 specimens each year on her vines, whereas this year she had already killed more than 150 larvae. This was the first brood and the second was even more abundant.

C E R E A L A N D F O R A G E - C R O P I N S E C T S

WHEAT

HESSIAN FLY (Phytophaga destructor Say)

Ohio. T. H. Parks (October 26): More than the usual amount of wheat was sowed early this fall but infestation is not serious enough to be a menace.

Missouri. L. Haseman (October 22): While earlier indications showed hessian fly to be relatively scarce throughout central Missouri, we are finding now on volunteer wheat and on early seeded wheat indications of an appreciable infestation. Unhatched eggs were observed today on wheat at Columbia.

Kansas. H. R. Bryson (October 25): Most wheat in southeastern Kansas is in the two-three leaf stage and is reported by R. H. Painter to be free of fly. Near Buffalo, in Wilson County, in a field consisting of wheat of two ages, the older planting was heavily infested.

CHINCH BUG (Blissus leucopterus Say)

South Carolina. F. Sherman and W. C. Nettles (October 16): Started the season strong but subsided during the summer. Farmers have learned more about chinch bug and its control than in any other year to our knowledge.

Illinois. W. P. Flint (October 21): Conditions for second-brood bugs were very favorable, with dry weather during the greater part of August and September. As a result, large numbers of bugs are now in hibernation quarters throughout the central part of the State. No definite survey has yet been made, but casual observations indicate enough bugs to cause severe damage next spring, should a normal winter survival take place.

Kansas. H. R. Bryson (October 23): Reported as having caused some injury to corn at Parsons. They were almost absent in Kansas but built up considerably in the season. Probably a good many will go into hibernation.

Oklahoma. C. F. Stiles (October 22): Chinch bugs are numerous in grain-sorghum fields throughout the central part of the State.

PLAINS FALSE WIREWORM (Eleodes opaca Say)

Nebraska. M. H. Swenk (October 20): A complaint of damage in wheat fields

in Fillmore County was received the second week in October.

Kansas. H. R. Bryson (October 22): False wireworms have caused considerable injury to wheat sown in dry soil. Soil conditions have been more favorable for the larvae this fall than last fall. Reports of injury have been received from Phillips, Meade, Haskell, and Lincoln Counties. Practically all of the counties in the western part of the State have experienced some injury.

A WHITE GRUB (Phyllophaga lanceolata Say)

Kansas. H. R. Bryson (October 23): A report was received of injury to wheat in Kingman County.

Oklahoma. F. A. Fenton (October 19): Reports have been received of white grub infestation of wheat in Medford. The grubs are probably P. lanceolata.

CORN

CORN EAR WORM (Heliothis obsoleta F.)

Maine. H. B. Peirson (October 19): Unusual numbers of moths were in flight on September 16 on the Bar Harbor coast.

Ohio. T. H. Parks (October 26): Late-maturing corn was not as badly injured as in most seasons.

Minnesota. A. G. Ruggles (October 18): None in June. Very abundant toward the end of the season. No damage to tomatoes.

Kansas. H. R. Bryson (October 22): The corn ear worm is reported to be more abundant in southeastern Kansas than it has been for several years. The larvae have been numerous in sorghum heads in most localities.

Texas. R. K. Fletcher (October 10): Larvae found infesting late roasting ears, butter beans, okra, cotton, zinnia, and hegari at Garland in Dallas County. Heaviest on hegari.

SOUTHERN CORNSTALK BORER (Diatraea crambidoides Grote)

South Carolina. F. Sherman and W. C. Nettles (October 16): Several reports of cornstalks falling because of work of the larvae. Such reports are seldom sent us.

BEETLES (Coleoptera)

Utah. G. F. Knowlton (September 29): Sweet corn at Logan is being damaged by the nitidulid Glischrochilus fasciatus Oliv. and the scarabaeid Euphoria inda L. One cob of corn brought in yesterday contained nine nitidulids and four of the scarabaeids. Several findings of this form in sweet corn were received during the season, beginning with the early corn crop.

CARROT BEETLE (Ligyrus gibbosus Deg.)

Tennessee. G. M. Bentley (October 25): Has been reported damaging cornfields in several places.

CORN ROOT APHID (Anuraphis maidi-radiciis Forbes)

South Carolina. F. Sherman and W. C. Nettles (October 16): More abundant than normal. Damage is chiefly in the eastern part of the State.

ALFALFA AND CLOVER

BLACK BLISTER BEETLE (Epicauta pennsylvanica Deg.)

Tennessee. G. M. Bentley (October 25): Has been a real pest in alfalfa fields, and also in young seedings of clover planted in August.

PEA APHID (Illinoia pisi Kltb.)

Maine. J. H. Hawkins (October 17): More pea aphids have been found on red and alsike clover in central Maine this fall than at any time during the last 2 years.

SORGHUM

SORGHUM WEBWORM (Celama sorghiella Riley)

Texas. F. L. Thomas (October 22): Noted on hegeri at Garland. Fifteen percent of kaffir heads infested at Alta Loma, Galveston County, on September 1.

LEAF-FOOTED BUG (Leptoglossus phyllopus L.)

Texas. J. N. Roney (October 22): Abundant on sorghum headson August 2 and September 5 in Galveston County.

VELVETBEANS

VELVETBEAN CATERPILLAR (Anticarsia gemmatilis Hbn.)

Florida. J. R. Watson (October 22): Adults are very abundant. The caterpillars are persisting later in the fall than usual, damaging not only velvetbeans and peanuts but also cowpeas. This is the first instance we have noticed of extensive damage to cowpeas by this insect.

Louisiana. B. A. Osterberger and C. L. Stracener (October 5): A trip was made to the North Louisiana Experiment Station, Ouachita Parish, at which time we found a few adults of the velvetbean caterpillar, the first generation of that section.

SUGARCANE

SUGARCANE BORER (Diatraea saccharalis F.)

Texas. F. L. Thomas (October 22): More abundant than usual in Galveston County. Twenty-five borers found in two stalks of cane. Also attacking corn and sorghum in Galveston County on September 1.

FRUIT INSECTS

APPLE

CODLING MOTH (Carpocapsa pomonella L.)

Massachusetts. A. I. Bourne (October 19): Damage was conspicuous in practically all orchards, even in the best-sprayed ones.

Virginia. W. S. Hough (October 23): Injury to apple above average in northern Virginia, largely because many growers failed to spray for control of second brood in July.

South Carolina. F. Sherman and W. C. Nettles (October 16): Some report less damage than usual and yield of apples is far above normal.

Georgia. C. H. Alden (October 18): In Cornelia all larvae are in winter cases, except a few that are now leaving the ripening fruit. No moths have come to the bait pots since September 25.

Ohio. T. H. Parks (October 26): One hundred and eleven orchards which had received from 6 to 12 spray applications were checked for insect and disease blemishes. The average percentage of stung fruit in the orchards was 3.5 percent, as compared with 5.6 percent in 1936. In 13 orchards less than one-tenth of 1 percent of the apples bore codling moth blemishes. Ten orchards averaged about 10 percent. The heaviest infestations were in Lawrence and Lucas Counties, where five orchards had over 25 percent of the apples blemished by this insect.

Michigan. R. Hutson (October 22): Damage was normal or slightly above; however, comparatively large populations of overwintering larvae are present.

Missouri. L. Haseman (October 22): Moths continued to fly at Columbia until September 28 and then after a lull of several days a few moths were taken on October 19. This is considerably later than previous records indicate, although we frequently have appreciable numbers of moths occurring as late as September 25. In some orchards late-brood larvae were picked up in abundance. Because of their abundance, an appreciable percentage of the winter apples picked in October showed worminess.

RED-BANDED LEAF ROLLER (Argyrotaenia velutinana Walk.)

Connecticut. P. Garman (October 21): More abundant than usual in New Haven and New London Counties, and doing serious damage in apple orchards where late sprays were omitted. Damaged fruit amounted to 9 percent maximum in one orchard.

APPLE MAGGOT (Rhagoletis pomonella Walsh)

Maine. F. H. Lathrop (October 20): In Monmouth, Kennebec County, a few flies

are still emerging in experimental cages, although freezing temperatures have occurred. Excellent control was obtained in commercial orchards. Unsprayed trees in general are infested.

West Virginia. L. M. Peairs (October 28): The apple maggot was very abundant in an orchard at French Creek. I saw only the rag-end of the infestation, but a competent entomologist assures me of the presence of the maggots over a considerable period late in the summer. He also stated that adults were numerous enough in the orchard to attract attention.

APPLE APHID (Aphis pomi Deg.)

Maine. F. H. Lathrop (October 20): Dry weather late in the summer caused a great reduction in the numbers of green aphids on apple trees in Monmouth, Kennebec County. Colonies are now difficult to find. Eggs were being deposited on experimental trees late in September and in October.

ROSY APPLE APHID (Anuraphis roseus Baker)

Virginia. W. S. Hough (October 23): This insect caused more damage in May and June in northern Virginia than has been observed since our last aphid year, 1933. At present fall migrants from plantain to apple are moderately numerous in all orchards examined.

LEAFHOPPERS (Cicadellidae)

Massachusetts. A. I. Bourne (October 19): The late brood of white apple leafhopper (Typhlocyba pomaria McAtee) was very abundant generally over the State, and many growers had considerable difficulty in checking them.

Missouri. L. Haseman (October 22): Two or three flights of leafhoppers occurred at Columbia around the middle of October, representing a number of different species. Flights have continued a little later than usual; however, with most fruit, shade, and forest trees still carrying green foliage, it has been possible for leafhoppers to work later than usual.

SAN JOSE SCALE (Aspidiotus perniciosus Comst.)

Virginia. W. S. Hough (October 23): Very scarce. Less prevalent in northern Virginia on apple than has been observed for many years.

Georgia. C. H. Alden (October 18): Adults moderately abundant in Cornelia on peach and some crawlers noted. Light infestation on apple wood and a few scales found on apples being harvested.

Georgia. O. I. Snapp (October 21): Frequent heavy rains in August retarded the infestation which was building up rapidly in July at Fort Valley, central Georgia. The infestation on peach trees is now somewhat less than that of an average year.

Illinois. W. P. Flint (October 21): The weather of the early fall was quite

favorable to the San Jose scale and a considerable increase occurred in the southern part of the State. Indications are that the southern Illinois peach orchards will have to be sprayed this fall.

COMSTOCKS MEALYBUG (Pseudococcus comstocki Kuw.)

Virginia. W. S. Hough (October 23): This mealybug developed to such an extent in a few apple orchards in Frederick & Clarke Counties that much fruit was damaged. The calyx end of some varieties turned black and on other varieties, such as York, both calyx and stem end turned black from the sooty mold which develops in the honeydew secreted by the mealybugs. Large white patches show on the bark, indicating deposition of overwintering egg masses.

PEACH

ORIENTAL FRUIT MOTH (Grapholitha molesta Busck)

Ohio. T. H. Parks (October 26): Almost every peach of varieties maturing in October is infested. Some have more than one larva. No evidence of injury to apples.

Michigan. R. Hutson (October 22): Was held in check by parasites in most peach-growing areas. About South Haven some orchards showed 30-40 per cent damage, notwithstanding the presence of several species of parasites.

Mississippi. C. Lyle (October 23): Heavy infestations have been reported from Jackson, Meridian, and Aberdeen districts.

PEACH BORER (Conopia exitiosa Say)

Georgia. C. H. Alden (October 18): Light infestation at Cornelia. Most orchards have been treated.

O. I. Snapp (October 21): Although there was a moderate infestation of overwintered larvae and resulting adults late in the summer, the indications are that new larvae are at present less abundant than usual in peach trees at Fort Valley. This somewhat light infestation is believed to be due to frequent heavy rains during the early part of the hatching season that undoubtedly prevented many larvae from gaining entrance into peach trees.

LESSER PEACH BORER (Conopia pictipes G. & R.)

Ohio. T. H. Parks (October 26): These insects are causing serious damage to peach trees in parts of Ottawa County. They are now present from very young to almost half-grown borers.

PLUM CURCULIO (Conotrachelus nenuphar Hbst.)

Maine. F. H. Lathrop (October 20): A few adults are emerging in experimental

cages at Monmouth, Kennebec County, although freezing temperatures have occurred. Injury to apples in commercial orchards and on unsprayed trees is distinctly more severe than usual.

Georgia. O. I. Snapp (October 21): Extensive jarring of peach trees by J. R. Thompson on September 23 and 25 showed that most of the adult curculios had left the trees at that time, 3 weeks after the appearance of many second-generation individuals on the same trees. It is not known whether these individuals went to other hosts or locations or into hibernation. A diligent search in woods adjoining peach orchards, under peach prunings, pine limbs, and grass during the latter part of September and the first half of October, failed to locate any adults, although other species of curculios and leaf beetles were found.

BLACK PEACH APHID (Anuraphis persicae-niger Smith)

South Carolina. F. Sherman and W. C. Nettles (October 16): Above average during the year.

CHERRY

SHOT-HOLE BORER (Scolytus rugulosus Ratz.)

Nebraska. M. H. Swenk (October 20): Reported attacking cherry trees in Clay County on September 28.

GRAPE

GRAPE BERRY MOTH (Polychrosis viteana Clem.)

Ohio. T. H. Parks (October 26): This insect is more abundant than usual in the commercial vineyards along Lake Erie.

Michigan. R. Hutson (October 22): Infestation has been severe in Berrien and Van Buren Counties.

PECAN

HICKORY SHUCK WORM (Laspeyresia caryana Fitch)

South Carolina. F. Sherman and W. C. Nettles (October 16): Some damage in eastern part of the State.

OBSCURE SCALE (Chrysomphalus obscurus Comst.)

Mississippi. C. Lyle (October 23): An infestation of obscure scale on pecan was noted at Webb on October 12.

HICKORY NUT

A WEEVIL (Curculio sp.)

Missouri. L. Haseman (October 22): In recent years, hickory nuts through

central Missouri have consistently shown a rather heavy nut weevil infestation. Nuts being gathered at this time show approximately a 5-percent infestation and it seems to be a little lighter on most trees than during the last few years. The hickory nut crop, however, is very heavy, which may account for the apparent reduction in percentage of nuts infested.

WALNUT

WALNUT HUSK FLY (Rhagoletis completa Cress.)

California. D. W. Tubbs (October 19): At the suggestion of D. B. Mackie, I report the finding of the walnut husk fly in Orange County. This is the first year this insect has been reported on the coastal side of the foothills lying between Orange County and the former area of infestation in Los Angeles and San Bernardino Counties. Specimens have been found across the north and northeasterly section of the county, particularly in the eastern and native black walnuts, and also in several commercial plantings of the Persian walnut.

H. J. Ryan (October 21): All of the Eureka variety of walnuts known to be infested in Los Angeles County, and most of the Placentia variety were sprayed. Control was satisfactory and, as compared with last year, was excellent.

WALNUT CATERPILLAR (Datana integerrima G. & R.)

Virginia. H. G. Walker and L. D. Anderson (October 26): The walnut datana was abundant on many walnut and hickory trees at Norfolk during the summer.

Minnesota. A. G. Ruggles (October 18): Reports numerous in September. Not quite as abundant, however, as in 1936.

Oklahoma. F. A. Fenton (October 19): The second brood of the walnut datana completed defoliation of pecan and walnut trees several weeks ago and some trees are beginning to put out a late crop of leaves.

CITRUS

CALIFORNIA RED SCALE (Chrysomphalus aurantii Mask.)

Texas. S. W. Clark (September 20): Causing serious damage to citrus in the Mission-Edinburg section in western Hidalgo County.

California. H. J. Ryan (October 21): Considerable control work was done in August and September and by the first of October a great many groves in Los Angeles County that were thought to be in excellent condition following spring and early summer treatment were carrying an extremely heavy population, which means that a great deal of late fall and early spring control work will be necessary.

DICTYOSPERMUM SCALE (Chrysomphalus dictyospermi Morg.)

Louisiana. I. J. Beñel (October): A light infestation of scales was found in the Louisiana State University grove at Baton Rouge. The specimens were studied by Dr. Harold Morrison and were found to be exceedingly close to C. dictyospermi, but showed slight differences from the characteristic form.

CLOUDY-WINGED WHITEFLY (Dialeurodes citrifolii Morg.)

Florida. J. R. Watson (October 22): The fall brood is on the wing in about the usual numbers.

A CITRUS MITE (Anychus clarkii McG.)

Texas. S. W. Clark (September 29): Extremely abundant in most citrus orchards in the lower Rio Grande Valley.

CITRUS RED MITE (Paratetranychus citri McG.)

California. H. J. Ryan (October 21): Infestations decreased during the latter part of September in Los Angeles County. High temperatures and low relative humidity are generally presumed to have been responsible.

MANGO

MANGO SHIELD SCALE (Coccus mangiferae Green)

Florida. E. W. Berger and G. B. Merrill (October 22): Abundant specimens received from leaves of mango trees at Bokeelia, Pine Island. Judging from the specimens received, a fungus, Aphalosporium lecanii, is controlling the scale.

TRUCK - CROP INSECTS

VEGETABLE WEEVIL (Listroderes obliquus Klug)

Alabama. J. M. Robinson (October 20): Moderately abundant at Auburn.

Mississippi. G. L. Bond (October 23): This insect has been injuring turnips at Moss Point during the last 2 weeks.

Texas. J. N. Roney (September 3): On carrots at Alta Loma in Galveston County, in an old carrot patch that had no cultivation for nearly a year.

CUCUMBER BEETLES (Diabrotica spp.)

Ohio. T. H. Parks (October 26): Adults of the southern corn rootworm (D. duodecimpunctata F.) were very numerous in September.

Missouri. L. Haseman (October 22): The spotted cucumber beetle is still moving about and feeding, particularly on late flowers. The striped cucumber beetle (D. vittata F.) ceased work and apparently went into hibernation in central Missouri around October 10.

Kansas. H. R. Bryson (October 25): Adults of the twelve-spotted cucumber beetles are more abundant than for several years.

BANDED CUCUMBER BEETLE (Diabrotica balteata Lec.)

Florida. J. R. Watson (October 22): Widely distributed on truck crops in the southern part of the State. In some sections it is doing considerable damage.

Alabama. J. M. Robinson (October 20): Very abundant on vegetables in central Alabama.

Texas. J. N. Roney (September 1): Abundant on beans, tomatoes, and beets in Galveston County.

SOUTHERN GREEN STINKBUG (Nezara viridula L.)

Florida. J. R. Watson (October 22): As during the past 2 years, unusually scarce in the Citrus Belt but unusually abundant in the western part of the State.

Mississippi. C. Lyle (October 23): Reported injuring cotton at Columbia, butter beans at Jackson, and soybeans and velvetbeans at New Augusta during this month.

Louisiana. B. A. Osterberger (October 15): The southern green stinkbug is now injuring young peas and beans in all sections of the State. Both adult and nymphal stages are feeding on pods.

Texas. F. L. Thomas (October 22): Observed on tomato, okra, butter beans, and peas in Rusk County, on October 15. Almost impossible to raise late peas.

TARNISHED PLANT BUG (Lygus pratensis L.)

Iowa. H. E. Jaques (October 18): Has been unusually abundant during September and October throughout much of southern Iowa. Their actual damage has probably been negligible, but large numbers on garden plants have proved very annoying.

Kansas. H. R. Bryson (October 23): More abundant this fall than last.

FALSE CHINCH BUG (Nysius ericae Schill.)

Michigan. R. Hutson (October 22): Numerous north of a line from Muskegon to Bay City.

A LEAF-FOOTED BUG (Leptoglossus sp.)

Alabama. J. M. Robinson (October 20): Leaf-leg bug is unusually abundant on field peas and late tomatoes.

MOLE CRICKETS (Gryllotalpa spp.)

Massachusetts. A. I. Bourne (October 19): In late September we received from southern Hampden County (in the Connecticut River Valley just above the Connecticut State line) specimens that proved to be the northern mole cricket (G. hexadactyla Perty), with the complaint that they were very abundant in a planting of potatoes. We visited this outbreak and found that while digging the potatoes the grower had uncovered more than 100 of these insects. Examination of his crop, which amounted to 40 or 50 bushels, showed more than 10 percent of it injured more or less, with many of the potatoes so deeply gouged that they were worthless. This is the first report of these insects occurring in appreciable numbers. We have taken them occasionally on the average of possibly one a season but never in large enough numbers to be considered of economic importance.

Alabama. J. M. Robinson (October 6): Mole crickets are causing considerable concern in gardens at Baker Hill.

Texas. F. L. Thomas (September 1): Mole crickets damaging general truck crops in Galveston County, and in Houston, Harris County, they are attacking dahlias.

TOMATO

TOMATO PINWORM (Gnorimoschema lycopersicella Busck)

Florida. J. R. Watson (October 22): A survey of the tomato fields in the southern part of the State showed the pinworm to be exceedingly scarce.

California. A. E. Michelbacher (October 22): Thousands of tomato fruits have been examined in the San Jose-Santa Clara area during October and approximately one-tenth of 1 percent of them were found to be infested. Last year only 2 specimens were collected, whereas this year no less than 25 have been taken.

CORN EAR WORM (Heliothis obsoleta F.)

California. A. E. Michelbacher (October 22): An examination of our check plots at Santa Clara on October 18 showed that 17 percent of the tomatoes were infested. At Brentwood on October 15 the infestation ran as high as 10 percent. Fields in Sacramento County were surveyed on October 20 and the infestation was found to range from 0.5 percent to 5 percent. The following day an examination of fields in Yolo County showed that the infestation ranged from 5 to 12 percent. Harvest in these two counties is nearly completed.

BEANS

MEXICAN BEAN BEETLE (Epilachna varivestis Muls.)

Tennessee. G. M. Bentley (October 25): Generally over the State there has been less injury than for the last several years. However, in certain localities, especially in upland regions of the State, the injury has been serious with untreated beans.

Mississippi. C. Lyle (October 23): Inspectors L. J. Goodgame and N. L. Douglass report serious damage to beans in Monroe and Yalobusha Counties, respectively. Heavy local infestations are reported from Laurel, Meridian, and West Point.

LIMA BEAN POD BORER (Etiella zinckenella Treit.)

Texas. R. K. Fletcher (October 10): Destroyed 50 percent of lima bean pods in Garland, Dallas County.

PEAS

BEET ARMYWORM (Laphygma exigua Hbn.)

California. J. C. Elmore (October 21): Has been very destructive to young pea plants at Riverside. The plants were entirely destroyed in parts of one field. This damage is associated with high temperature (100°F. on October 21).

CABBAGE

DIAMONDBACK MOTH (Plutella maculipennis Curt.)

Virginia. H. G. Walker and L. D. Anderson (October 26): A few larvae of the diamondbacked moth are beginning to appear in some fields of kale and

collards at Norfolk, but it is doubtful whether they will do much damage.

CABBAGE LOOPER, (Autographa brassicae Riley)

Texas. J. N. Roney (October 22): On cabbage and collards at Alta Loma, Galveston County, in August. Also abundant on cabbage, cauliflower, and collards in Galveston County on September 1.

S. W. Clark (October 4): Attacking cabbage. Moderately abundant in seedbeds.

CABBAGE WEBWORM (Hellula undalis F.)

Texas. S. W. Clark (October 4): Reported injuring 20 percent of the plants in a cabbage seedbed at Donna, Hidalgo County.

HARLEQUIN BUG (Murgantia histrionica Hahn)

Virginia. H. G. Walker and L. D. Anderson (October 26): Although the harlequin bug has been slightly more abundant this year than last, it has caused very little damage, except in a few isolated instances at Norfolk.

West Virginia. L. M. Peairs (October 28): The harlequin cabbage bug continues to be locally abundant and reports are so scattered that it is doubtless present in most parts of the State, locally as a pest. From about 1915 to about 1930 or 1931 this insect was practically absent from the State. It seems now to have notable reduction in population.

SQUASH

SQUASH BUG (Anasa tristis Deg.)

Minnesota. A. G. Ruggles (October 18): More complaints than usual of damage to cucumbers. The insect is never found north of St. Paul and Minneapolis. One case reported from St. Paul this year.

Iowa. H. E. Jaques (October 18): The squash bug is now going into hibernation in large numbers.

PICKLEWORMS (Diaphania spp.)

Florida. J. R. Watson (October 22): The melonworm and the pickleworm are doing their usual damage to the fall crops of squash and cucumbers.

TURNIP

TURNIP APHID (Rhopalosiphum pseudobrassicae Davis)

Virginia. H. G. Walker and L. D. Anderson (October 26): A heavy infestation was observed at Norfolk in a 10-acre field of Hanover salad, and several cabbage seedbeds have been reported as being rather heavily infested.

Mississippi. C. Lyle (October 23): Reports of aphid injury to turnips have been received from the Meridian, Ocean Springs, and State College districts.

Louisiana. P. K. Harrison (October 19): Not as abundant as in some years at Baton Rouge but increasing in numbers. Damage is light.

Texas. J. N. Roney (October 22): A few wingless forms on turnips and mustard in Galveston County.

CELERY

A PILLBUG (*Oniscidae*)

South Carolina. J. N. Todd (October 8): The pillbug was found to be injuring a planting of celery at West Union.

PEANUTS

SPOTTED CUCUMBER BEETLE (*Diabrotica duodecimpunctata* F.)

Virginia. F. W. Poos (September 20): Considerable injury to pods of immature peanuts in the soil; at Holland a very high percentage of the nuts is infested in low damp spots in the fields.

STRAWBERRY

STRAWBERRY CROWN MINER (*Aristotelia fragariae* Busck)

North Dakota. J. A. Munro (September 17): Reported as pest of strawberry in North Dakota. (Det. by Carl Heinrich.)

SWEETPOTATO

SWEETPOTATO WEEVIL (*Cylas formicarius* F.)

Texas. F. L. Thomas (October 22): In sweetpotatoes in August at Alta Loma, Galveston County. Adults taken at light in a State Park at Bastrop, Bastrop County, on several occasions from the latter part of September to October 15.

SWEETPOTATO HORNWORM (*Herse cingulata* F.)

Florida. J. R. Watson (October 22): The sweetpotato sphinx is reported to be doing considerable damage in Bradford County.

PEPPER

PEPPER WEEVIL (*Anthonomus eugenii* Cano)

Florida. J. R. Watson (October 22): A survey of the bell pepper plants in Manatee County revealed no pepper weevils on the young plants either in

the seedbeds or recently set in the field, but a small plantation of hot peppers, which had been carried through the summer, had a heavy infestation, about 85 percent of the peppers being infested.

BEETS

HAWAIIAN BEET WEBWORM (Hymenia fascialis Cram.)

Virginia. H. G. Walker and L. D. Anderson (October 26): Present in small numbers in spinach at Norfolk but has not caused much damage.

Texas. J. N. Roney (October 22): Abundant on beets, completely destroying the foliage on untreated areas where the crop was not dusted in Galveston County. First appeared in July. This pest has practically eliminated planting of beets as a fall crop in Galveston County.

BEET LEAFHOPPER (Eutettix tenellus Bak.)

Texas. M. J. Janes (October 25): Light migration of beet leafhoppers into the Winter Garden area began October 8. One female taken on 300 square feet of spinach where the leafhoppers were absent during the summer months. Survey indicates that only a small population exists in summer breeding grounds to the northwest.

TOBACCO

TOBACCO WORM (Protoparce quinquemaculata Haw.)

Connecticut. A. W. Morrill, Jr. (October): In the Connecticut River Valley these insects usually appear in greater numbers on the suckers, which are of no commercial importance, than on tobacco plants before harvest. This season, however, was late and much damage was done before harvest. Even on suckers the attack is said by growers to be the worst in 43 years.

C O T T O N I N S E C T S

BOLL WEEVIL (Anthonomus grandis Boh.)

South Carolina. F. Sherman and W. C. Nettles (October 16): Unusual number in spring, population high throughout the season, but heavy infestations were spotted and worse in the eastern section, where loss was severe on some farms.

Georgia. O. I. Snapp (August 20): The boll weevil, rather scarce a month ago, increased rapidly at Fort Valley, central Georgia, during the last 2 weeks, with frequent rains, and the infestation now is moderate, although the crop is about made. Some damage is still being done.

Tennessee. G. M. Bentley (October 25): Not a single specimen of the boll

weevil has been reported as being taken in the State this year. Generally numbers not sufficient to cause injury are found in the latter part of August and early in September.

Oklahoma. C. F. Stiles (October 22): The boll weevil has destroyed all of the late crop throughout central and southeastern Oklahoma. There are many times as many weevils in the fields in the southeastern quarter of the State as there were this time last year.

Alabama. J. M. Robinson (October 20): The boll weevil is from scarce to moderately abundant at Auburn.

Mississippi. C. Lyle (October 23): Boll weevils are present in large numbers in cotton fields in all parts of the State. An unusually large number will enter hibernation.

COTTON LEAF WORM (Alabama argillacea Hbn.)

South Carolina. F. Sherman and W. C. Nettles (October 16): We have known only one field that showed noticeable damage. It was in the eastern part of the State.

Georgia. O. I. Snapp (October 21): The cotton leaf worm has been noticeably less abundant this fall at Fort Valley than usual. Only a few specimens have been seen, and the insect has done no damage.

Missouri. L. Haseman (October 4): We observed moths at Columbia on September 27 for the first time this fall. Great numbers of them around apple pomace.

Oklahoma. C. F. Stiles (October 22): Generally present over the entire State, but most of the defoliation occurred in the southeastern part.

Mississippi. C. Lyle (October 23): Still present in the northern and western parts of the State but doing very little damage.

Texas. J. N. Roney (October 22): Moths were attacking figs on September 1 in Galveston and Harris Counties.

SOUTHERN GREEN STINKBUG (Nezara viridula L.)

Florida. H. C. Young (September 29): Approximately 70 acres of cotton 6 miles south of Jay was damaged. In one 40-acre field that had received 500 pounds of commercial fertilizer per acre the yield was only 7 bales, or approximately 270 pounds of seed cotton per acre. The usual production on this land has been from 1,000 to 1,250 pounds per acre. Certain spots, several acres in size, did not produce enough cotton to warrant picking. In some spots the bolls were not attacked until they were about mature and they are still hanging on the plants but were damaged so that they did not open. In other parts of the field only small bolls were to be found. The stinkbugs were so numerous they destroyed the crop before the bolls attained appreciable size. It is possible that some damage

could have been caused by the rapid plant bug (Adelphocoris rapidus Say), as the limbs of the plants are crooked, indicating Adelphocoris work. Farmers reported that the stinkbug attacked the young corn plants and caused many to be distorted. The damage to corn ears was confined to a strip approximately 100 feet wide adjoining a peanut field. The stinkbugs are still present in large numbers attacking the nuts where they are near the surface of the soil. Farmers report that the stinkbugs were fairly abundant last September and October and the mild winter was very favorable for their survival.

COTTON STAINER (Dysdercus suturellus H. S.)

Florida. J. R. Watson (October 22): In certain sections the cotton stainer has been doing some damage to the crop of Sea Island cotton.

F O R E S T A N D S H A D E - T R E E I N S E C T S

GYPSY MOTH (Porthetria dispar L.)

New York. A. F. Burgess (September 30): Some of the men engaged in work on the pine blister rust discovered gypsy moth egg clusters on Trumbull Mountain, in the town of Hague, Warren County. This town adjoins the barrier zone on the west. They report that a gypsy moth colony was found in the township of Southeast, in Putnam County, about $\frac{1}{4}$ mile from a cage where three moths were attracted this summer. About 30 egg clusters have been treated and work will be continued.

FALL CANKERWORM (Alsophila pometaria Harr.)

Iowa. H. E. Jaques (October 18): Showing up as adults where it has been causing trouble on elm and apple. It is probable that the fall flight and resultant egg laying will be unusually heavy.

FALL WEBWORM (Hyphantria cunea Drury)

Massachusetts. A. I. Bourne (October 19): We found that the fall webworm, which is annually quite abundant and conspicuous late in the summer and early in the fall over the State as a whole, was this year comparatively scarce. Not only was it seldom seen in orchards but it was also unusually scarce along the roadsides.

Ohio. E. W. Mendenhall (September 25): Was very abundant last summer and caused some concern.

Tennessee. G. M. Bentley (October 25): This insect as a rule starts its work the latter part of July and continues until killing frost, but this year injury has been very light.

Texas. F. L. Thomas (October 22): Rather abundant on pecan in Robertson, Leon,

and Galveston Counties on September 10.

California. K. A. Salman (September 20): Many webs on black walnut shade trees growing along the roadside in Colusa and Princeton, Colusa County, north-central California. Trees damaged by defoliation.

SOUTHERN PINE SAWYER (Monochamus titillator F.)

West Virginia. F. W. Craig (September 28): Attacking hemlocks in a nursery at Huntington. (Det. by A. G. Boving.)

Georgia. T. L. Bissell (October 26): Reports continuing to come in from Griffin and McDonough of injury to deodar cedar due, in part at least, to this species.

WALKINGSTICKS (Phasmidae)

Virginia. R. G. Pierce (October 15): There was an epidemic of walkingsticks, which seemed to have defoliated trees on about 100 acres on Gimlet Ridge, Warren County, between Browntown and Bentonville. There was also a severe defoliation on Pickrel Ridge, Rappahannock County. The trees most heavily defoliated were oak, hickory, and locust.

Minnesota. A. G. Ruggles (October 18): On a farm in Dakota County millions of walkingsticks were denuding young oak, wild cherry, and hazelnut. They were also eating quackgrass.

BEECH

BEECH SCALE (Cryptococcus fagi Baer.)

New York. E. P. Felt (October 23): Found generally present, and on some trees at New Rochelle it was abundant.

BIRCH

BIRCH LEAF-MINER SAWFLY (Phyllotoma nemorata Fall.)

Maine. H. B. Peirson (October 19): Noticeably heavy infestations occurred this year, causing foliage to be well browned and mined at Knox, south-central Maine, and in the Dead River area, in western Maine.

BRONZED BIRCH BORER (Agrilus anxius Gory)

Ohio. E. W. Mendenhall (October 2): In Springfield and Dayton the injury to birch trees is severe.

CATALPA

CATALPA SPHINX (Ceratomia catalpae Bdv.)

South Carolina. F. Sherman and W. C. Nettles (October 16): Occasional trees

have been defoliated but there has been no epidemic. The catalpa tree is neither important nor numerous and we believe that the popular use of the larvae for fish bait is a genuine factor in holding down its numbers on the few trees we have. In many years we have noticed also the effective work of parasites.

Ohio. E. W. Mendenhall (September 30): Nearly all of the catalpa trees throughout central Ohio were defoliated.

ELM

ELM LEAF BEETLE (Galerucella xanthomelaena Schr.)

Ohio. E. W. Mendenhall (September 30): Abundant on all varieties of elm, including the Chinese elms, at Columbus.

ELM BORER (Saperda tridentata Oliv.)

Ohio. E. W. Mendenhall (October 1): Does a great deal of damage to elms where they have been weakened by drought.

TWIG GIRDLER (Oncideres cingulatus Say)

Louisiana. B. A. Osterberger (October 15): A report was received of twigs on very large elms being pruned at Baton Rouge. Upon investigation it was found to be the work of a girdler, perhaps O. cingulatus.

MOURNING-CLOAK BUTTERFLY (Hamadryas antiopa L.)

Minnesota. A. G. Ruggles (October 18): More reports than usual of this insect defoliating elms, particularly Chinese elms, in the northern half of the State.

WOOLLY ELM BARK APHID (Eriosoma rileyi Thos.)

Ohio. E. W. Mendenhall (October 2): Severe on elms in certain localities in Columbus.

EUROPEAN ELM SCALE (Gossyparia spuria Mod.)

Ohio. E. W. Mendenhall (October 2): Severely infesting elm trees, especially young trees, in central Ohio.

California. K. A. Salmon (October 6): Shade trees along the streets of Susanville, Lassen County, northeastern California, found to be infested. Infestation ranging from light to very heavy is general in the town. On some trees twigs are dead or dying, on some whole branches have been killed, and some have yellow foliage.

FIR

AN APHID (Dreyfusia piceae Ratz.)

Oregon. F. P. Keen (September 20): Several dozen ornamental white firs on an

estate near Salem heavily infested. The galls about terminal buds have disfigured and weakened the trees considerably.

A TUSsock Moth (Hemerocampa sp.)

California. K. A. Salman (October 4): This is the second year of defoliation of white fir trees in the mountains east of Adin, Modoc County. Centers of infestation last season were in the vicinity of Rush Creek. This season's infestations were light there but heavier in areas and watersheds east of Rush Creek and Fox Mountain.

HEMLOCK

HEMLOCK LOOPER (Ellopia fiscellaria Guen.)

Maine. H. B. Peirson (October 19): Flight of moths at Bar Harbor on September 20 reported but not as heavy as last year.

LOCUST

LOCUST BORER (Cyrtene robiniae Forst.)

New York. R. E. Horsey (October 1): Considerable damage to a planting of ornamental varieties of the common locust at Rochester. In some cases the branches and trunks were well riddled with tunnels. An adult beetle was found today.

Ohio. E. W. Mendenhall (October 2): Locust borers are quite bad in black locust and are doing considerable damage throughout central and southern Ohio.

Iowa. H. E. Jaques (October 18): The adults of the locust borer are fairly abundant on their fall food plant, the goldenrod.

MAPLE

SUGAR MAPLE BORER (Glycobius speciosus Say)

Ohio. E. W. Mendenhall (October 16): Maple trees, especially street trees, severely infested in cities and towns in central Ohio.

TERRAPIN SCALE (Lecanium nigrofasciatum Perg.)

Ohio. J. S. Houser (October): Many examples of encrusted branches of maple have been sent in for determination. This insect is more abundant than it has been for several years. It is widespread over the State.

OAK

TWIG PRUNER (Hypermallus villosus F.)

Massachusetts. A. I. Bourne (October 19): Two years ago this insect was so

abundant that it caused some of the power companies considerable expense on account of short-circuiting caused by infested branches breaking down onto the wires, particularly during storms with high winds. This year we have had practically no complaints and several owners who had been keeping their trees under close observation for the last 2 or 3 years reported that so far as they could discover the pest did not appear this year. In any event it was very scarce.

Ohio. E. W. Mendenhall (October 14): Noticeable where oaks are grown in timber lots and along the streets in central Ohio.

A SAWFLY (Eriocampoides fasciata Nort.)

Iowa. H. E. Jaques (October 18): Has destroyed the mesophyll of half or more of the leaves on two pin oaks on the campus of Iowa Wesleyan, at Mount Pleasant.

OAK LACEBUG (Corythucha arcuata Say)

New York. E. P. Felt (October 23): Disfigured oak leaves at Newburgh.

A GALL INSECT (Neuroterus papillosus Beutm.)

New York. E. P. Felt (October 23): Were extremely abundant on white oak leaves at Pelham and also at East Norwich, Long Island.

PINE

SAWFLIES (Neodiprion spp.)

Ohio. J. S. Houser (September 22 to October 18): N. pinetum Nort. seems to be unusually prevalent this season at Wooster, McArthur, and North Olmsted. Trees 18 feet tall near Wooster were stripped. Insects were feeding abundantly as late as October 6. Many puparia found under trees. Some have gone into the soil $\frac{1}{2}$ inch.

Michigan. R. Hutson (October 22): Larvae of Abbott's sawfly (N. abbotti Leach) and Leconte's sawfly (N. lecontei Fitch) have been numerous, reports coming from Stockbridge, Kalamazoo, Cadillac, Traverse City, Saginaw, and Detroit.

Louisiana. B. A. Osterberger (September 21): A specimen of sawfly was sent in from northern Louisiana, and reported to be injuring young pine. (Det. by R. A. Cushman as Neodiprion, probably lecontei.)

A WEEVIL (Hypomolyx piceus Deg.)

Maine. H. B. Peirson (October 19): On September 12 at Castine, on the central coast, Scotch pine trees were dying from effects of grubs of this weevil working just below ground level, beneath the bark. Grubs were full grown at the time.

PALES WEEVIL (Hylobius pales Hbst.)

New Hampshire. R. B. Friend (October 20): About 70 percent of the white pine trees planted at Keene last spring, in an area cut in the winter of 1936-37, are already dead. This is probably not an unusual degree of injury for the locality.

PINE NEEDLE SCALE (Chionaspis pinifoliae Fitch)

Utah. G. F. Knowlton (October 10): Ornamental pines and spruce have been heavily infested with pine leaf scale during the current season.

POPLAR

POPLAR TENTMAKE (Ichthyura inclusa Hbn.)

West Virginia. L. M. Peairs (October 28): Has been very abundant on poplars of several species, notably Populus alba, P. grandidentata, and P. tremuloides in many localities in the State. I have observed it from Ohio, Upshur, and Monongalia Counties, also in Jefferson and Berkeley Counties, the Eastern Panhandle. It had been scarce for many years.

I N S E C T S A F F E C T I N G G R E E N H O U S E

A N D O R N A M E N T A L P L A N T S

HAIRY CHINCH BUG (Blissus hirtus Montd.)

New York. E. P. Felt (October 23): This season has been marked by its appearance in numbers farther north than usual, notably at Ossining and Bedford.

SOD WEBWORMS (Crambus sp.)

Florida. J. R. Watson (October 22): Sod webworms are still very abundant and destructive to lawns and golf courses. They apparently attack equally all lawn grasses--Bermuda, centipede, carpet, and Saint Augustine.

Louisiana. B. A. Osterberger (October 12): A grass sod worm has been severely injuring lawns and pastures in many sections of southern Louisiana. The larvae have been observed migrating.

CITRUS MEALYBUG (Pseudococcus citri Risso)

Ohio. E. W. Mendenhall (October 15): The mealybugs are abundant and injurious on lantana at Springfield. Treatment given.

COTTONY-CUSHION SCALE (Icerya purchasi Mask.)

North Carolina. Mrs. Albert Brown (October 6): "I cut down a handsome mimosa

tree at Wilmington, which was infested with the scale, and another is completely covered by the pest. English ivy is infested, besides bushes of the shrub 'breath of spring.'

Georgia. J. M. Robinson (October 20): Moderately abundant on rose bushes at Thomasville on September 21.

WHITE PEACH SCALE (*Aulacaspis pentagona* Targ.)

Mississippi. C. Lyle (October 23): Specimens of the white peach scale on peach were received from the county agent at Fayette on October 11.

Texas. F. L. Thomas (October 22): This insect is abundant in Harris and Galveston Counties. Has spread to the central part of the State, where it is attacking ornamental shrubs, mulberry, and Chinaberry. It has failed to maintain itself in some locations of central Texas.

AZALEA

A STEM BORER (*Oberea myops* Hald.)

Delaware. E. P. Felt (October 23): Somewhat common in azalea stems at Wilmington.

CANNA

LARGER CANNA LEAF ROLLER (*Calpodes ethlius* Cram.)

Massachusetts. A. I. Bourne (October 19): In a rather restricted area around New Bedford, in the extreme southeastern part of the State, considerable damage was being caused to plantings of canna. The species is a rather common pest farther south but so far as I know this is the first report of serious injury in Massachusetts.

CEDAR

A SCALE (*Eriococcus gillettei* Tinsley)

Nebraska. M. H. Swenk (October 20): On September 25 a 10-year-old cedar tree in Saunders County was reported to be infested.

EUONYMUS

EUONYMUS SCALE (*Chionaspis euonymi* Comst.)

Pennsylvania. E. P. Felt (October 23): Somewhat abundant on pachysandra in the Philadelphia area.

GLADIOLUS

THRIPS (Thysanoptera)

Florida. J. R. Watson (October 22): A survey of the young gladiolus plants

in Manatee County revealed a very light infestation of Frankliniella fusca Hinds (tobacco thrips) but none of Taeniothrips simplex Morison.

Minnesota. A. G. Ruggles (October 18): Gladiolus thrips are very numerous in untreated plantings this year.

CORN EAR WORM (Heliothis obsoleta F.)

Florida. J. R. Watson (October 22): Was doing more damage to gladiolus than any other insect, mining not only the unopened flowering spikes but in many instances the main stem of the plants. Also damaging young tomato plants by mining the stems.

BEEET ARMYWORM (Laphygma exigua Hbn.)

California. R. E. Campbell (October 22): The infestation in Vista, San Diego County, is extremely heavy and almost ruined a planting of 3 or 4 acres of gladiolus.

LILAC

GIANT HORNET (Vespa crabo L.)

Maryland. E. N. Cory (October 18): Noted on lilac in Kent County. This is a new locality record.

ORCHID

ORCHID WEEVIL (Diorymerellus laevimargo Champ.)

Delaware. H. F. Dietz (October 4): This pest has been causing considerable injury to Cattleyas and Dendrobiums in orchid houses around Wilmington. The injury is greatly out of proportion to the number of beetles it has been possible to collect. This is accounted for by the fact that minor feeding injuries to the roots become infected with an unidentified fungus which results in the death of these roots.

Ohio. E. W. Mendenhall (October 1): Black Diorymerellus was quite bad in an orchid house at Columbus. Treatment was given.

PRIVET

JAPANESE SCALE (Leucaspis japonica Ckll.)

Pennsylvania. E. F. Felt (October 23): Was found in abundance on a privet hedge in the Philadelphia area.

RHODODENDRON

AZALEA SCALE (Eriococcus azaleae Comst.)

West Virginia. F. W. Craig (September 28): I have never found any scale on

rhododendron in this State until last fall, when it was found on one plant at Moundsville. The plant was sprayed twice last winter with oil. At present there is still live scale on this plant and additional plants have been infested. (Det. by H. Morrison.)

ROSE

ROSE SCALE (Aulacaspis rosae Bouche)

Ohio. E. W. Mendenhall (October 1): Quite bad on roses in certain localities in Franklin County. Stocks were plastered.

INSECTS ATTACKING MAN AND

DOMESTIC ANIMALS

MAN

A SANDFLY (Culicoides canithorax Hoff.)

Georgia. J. B. Hull (September 30): Sandflies, particularly C. canithorax, began emerging at Savannah during the latter part of September, and from the increasing numbers taken in recovery cages it is indicated that the emergence of the fall brood of this pest has begun.

PUSS CATERPILLAR (Megalopyge opercularis S. & A.)

South Carolina. F. Sherman and W. C. Nettles (October 16): Several inquiries, and as usual they are chiefly with reference to stings by the larvae.

Alabama. R. K. Wilson (October 21): Larva received from Dothan for determination. The specimen was taken from the arm of a patient in whom it had produced pain and a local urticaria.

Mississippi. C. Lyle (October 23): Specimens were received from Kosciusko on September 30 and from Wesson on September 23. Inspector N. D. Peets, of Brookhaven, writes that several specimens were brought to his office with the information that the people who had been injured by them experienced severe pain and fever.

Texas. W. E. Dove (October 25): Within 50 miles of San Antonio different persons complained of painful stings of this caterpillar. On several occasions it was encountered in public parks during the month of October.

SADDLEBACK CATERPILLAR (Sibine stimulea Clem.)

Maryland. E. N. Cory (October 1): Seemed to be unusually abundant generally.

TROPICAL RAT MITE (Liponyssus bacoti Hirst.)

Mississippi. J. P. Kislanko (October 23): Several homes in Wiggins have been

heavily infested with the tropical rat mite.

BLACK WIDOW SPIDER (Latrodectus mactans F.)

North Carolina. B. H. Wilford (October 30): We found one female in the basement of a residence in Asheville. Another female was brought to the office for identification. There were far fewer calls concerning black widow spiders this summer than during the same period of 1936.

Nebraska. M. H. Swenk (October 20): Complaints of, and inquiries concerning, the black widow spider continued to be received during the entire period September 20 to October 20.

DOG

BROWN DOG TICK (Rhipicephalus sanguinius Latr.)

Maryland. E. N. Cory (October 18): We have recently received a report from Towson. One or two records each year for the past 4 or 5 years of invasion of homes by this southern tick.

Illinois. C. L. Metcalf (October 12): We have a report, accompanied by a specimen from Waukegan, of a dog heavily infested.

SUCKING DOG LOUSE (Linognathus piliferus Burm.)

Ohio. J. S. Houser (October 4): Specimens forwarded from Cleveland taken from a dog.

CATTLE

SCREWORM (Cochliomyia americana C. & P.)

South Carolina. K. Dorward (October 23): Reduced numbers of cases were reported during the month. For the week ended October 8 there were 94 new cases; by October 15 there were 72 new cases; and on October 23, 81 new cases were estimated in the State. The principal infestation continues to be in Colleton County. Single cases occurred in Lexington and Barnwell Counties, the most northern record of the season being 7 miles east of Lexington.

Georgia. R. A. Roberts (October 23): The greater infestation occurs in Seminole and Decatur Counties, also east and south of a line of counties indicated by Grady, Colquitt, Tift, Telfair, and Emanuel. During the last 2 weeks a reduction of approximately 20 percent of the cases first occurred in the southeastern counties and was later in evidence in the southwestern counties. In the northeastern portion, in the vicinity of Bulloch and Emanuel Counties, cases continued with a high incidence.

Florida. R. A. Roberts (October 23): Reports of 1,247 cases, including four representative counties in the State (Madison, Levy, Polk, and Glades)

show progressive decreases in the incidence of cases. The rates of occurrence among 100,000 animals were: October 8, 1,036; October 15, 527; and October 25, 439. The extent of spread of the infestation in western Florida includes 50 cases in the eastern portion of Jackson County. No cases were found west of Marianna.

Alabama. R. A. Roberts (October 23): During the past 2-week period 25 cases occurred in Houston County, but were treated promptly. They were reported in the vicinity of Cottonwood and Crosby, and specimens were identified from Gordon. On October 26 no new cases were found in Houston and Henry Counties nor in the stockyards at Montgomery.

Missouri. G. D. Jones (October 18): Last week the county agent in Jackson County reported several cases in that county this fall.

Kansas. W. E. Dove (October 25): Three hundred and forty-five cases were reported in Butler County by the county agent.

Texas. W. E. Dove (October 30): In the southern counties of Texas 5,461 cases were reported among 1,044,245 animals for the 4-week period ended October 23. Localized outbreaks occurred in portions of Willacy, Kenedy, Kleberg, Bee, Refugio, Victoria, Calhoun, Jackson, and Matagorda Counties. Of these, 4,687 cases were attributed to bites of the Gulf coast tick (Amblyomma maculatum Koch.). Other counties reporting localized outbreaks were Kinney, Bastrop, Taylor, Fisher, and Dawson. From questionnaires received from 73 counties, 23 reported no cases during the month ended October 15. From 50 counties 1,311 cases were reported by stockmen among 92,986 animals, or at the rate of 1,409 cases in 100,000 animals. Cases were of rare occurrence in eastern and northern Texas. Normally screw-worm cases are most numerous in Texas from early September until frost, but this year and last year are said to be exceptions. Some stockmen say that screwworms are less numerous this year than at any time during the past 18 years.

Illinois. W. E. Dove (October 30): About 600 cases were treated in Menard County since the middle of July. Specimens from one case at Springfield were identified, and one case was reported from Sangamon County.

GULF COAST TICK (Amblyomma maculatum Koch)

Alabama. J. M. Robinson (October 20): A female of the Gulf coast tick was taken from the ear of a cow at Citronelle on October 5.

HORSE

HORSE BOTFLIES (Gastrophilus spp.)

Texas. F. C. Bishopp (October 18): About 6 o'clock this evening adults of G. intestinalis Deg. were observed to be very active laying eggs on horses on a farm near Uvalde. The horses were rather heavily infested with eggs, these being very abundant on the inside of the front legs and reasonably

abundant on the outside of the legs, on the breast, shoulders, and neck. One specimen of G. nasalis L. was observed to be ovipositing under the jaws of one of the horses. A moderate number of eggs of this species were present on this group of animals. D. C. Parman, of the Uvalde laboratory, states that the bot eggs are much more numerous on the horses this year than they were last, and last year he reported that bots had not been observed on horses in the vicinity of Uvalde for some years previously.

SHEEP

SHEEP BOTFLY (*Oestrus ovis* L.)

Texas. O. G. Babcock (October): The sheep nose botflies apparently were not very active during the past summer months at Sonora, but are appearing in greater numbers this fall.

HOUSEHOLD AND STORED-PRODUCTS INSECTS

TERMITES (*Reticulitermes* spp.)

Massachusetts. A. I. Bourne (October 19): We had one instance brought to our attention where termites were found to be attacking the roots of living pine trees. This rather unusual outbreak occurred in South Harwich, which is well on toward the eastern end of Cape Cod.

Illinois. W. P. Flint (October 21): Reports of termite damage continue to be received from all parts of central and southern Illinois.

Tennessee. G. M. Bentley (October 10): In strawberry fields in and around those sections where there have been piles of wood or decayed stumps, appreciable damage by termites has been done to strawberry plants.

Alabama. J. M. Robinson (October 4): Termites were reported as seriously damaging the flooring in mills at Anniston. At Tallassee they destroyed the paneling in the dining room of a \$40,000 residence.

Missouri. L. Haseman (October 22): Normally at this season termites are readily found for class work in practically any wood that has been lying on the ground for any length of time, but this fall they seem to be much scarcer than usual, indicating perhaps a tendency to cease feeding early due to the continued cool weather throughout the month.

Nebraska. M. H. Swenk (October 20): Complaints of damage by termites, R. tibialis Banks, were received from Otoe, Box Butte, and Kearney Counties.

Texas. F. L. Thomas (October 22): Termites causing damage in Texarkana, Bowie County, September 20; also at Big Spring in Howard County, September 25.

Nevada. G. G. Schweis (October 20): An infestation of termites occurred in a dwelling in Sparks and caused enough damage that it will be necessary to

rebuild a portion of the house. The termite situation is rather unusual in western Nevada as up to about 3 years ago there were practically no infestations reported to the entomologist's office. The last 3 years, however, we have had several cases where the damage has been extensive enough to necessitate rebuilding of at least a portion of the infested building.

Oregon. R. L. Furniss (September 3): A large and recently constructed house in Portland was found to be infested with the subterranean termite, R. hesperus Banks. Rarely reported in Portland.

HOUSE CRICKET (Gryllus domesticus L.)

Minnesota. A. G. Ruggles (October 15): Complaints from housewives of the crickets invading houses. Very abundant in Jackson County.

ARGENTINE ANT (Iridomyrmex humilis Mayr)

Mississippi. C. Lyle (October 23): Specimens were received from Prentiss on October 4. Also these ants are reported causing trouble in the Durant territory.

BOXELDER BUG (Leptocoris trivittatus Say)

Michigan. R. Hutson (October 22): Boxelder bugs are numerous at Fenton, Farmington, Ann Arbor, and Manchester.

Minnesota. A. G. Ruggles (October 18): Reports just beginning to come in this month. Reports show them to be as abundant as in other bad years.

Iowa. H. E. Jaques (October 18): Continues to be very annoying in many regions throughout southern Iowa.

Kansas. H. R. Bryson (October 23): This species is more abundant at Manhattan than last, judging from the numbers seeking hibernating quarters on the south side of buildings.

STRAWBERRY ROOT WEEVIL (Brachyrhinus ovatus L.)

Minnesota. A. G. Ruggles (October 18): Several reports of damage to evergreens but more from housewives of the adults getting into houses.

POWDER POST BEETLES (Lyctus spp.)

Maryland. E. N. Cory (October 18): Found in house in Crisfield.

Virginia. H. G. Walker and L. D. Anderson (October 26): Several buildings in and near Norfolk have been rather heavily infested this year.

Michigan. R. Hutson (October 22): Powder post beetles have been reported from Three Rivers, Cassopolis, Benton Harbor, and Kalamazoo.

WHITE-MARKED SPIDER BEETLE (Ptinus brunneus Duft.)

Ohio. T. H. Parks (August 30): Adults and larvae were received from Urbana with the statement that they were abundant in hog food containing oil meal, tankage, and other ingredients. They were also eating holes in the bags and causing loss of the feed. The feed had been in storehouse only 40 days.

ANOBIIDS (Coleoptera)

Connecticut. N. Turner (October 4): At Middletown floor badly damaged by Anobium punctatum Deg. The flooring was apparently native lumber. Scraps of wood in the basement and newly built basement partitions were also attacked. (October 22): Two colonial buildings in the State were examined within a week and found seriously infested with Xestobium rufovillosum Deg.

A DERMESTID (Dermestes cadaverinus F.)

Louisiana. M. D. Leonard (September 13): Specimens from Shreveport were sent in for identification stating that a considerable infestation was found.

CIGARETTE BEETLE (Lasioderma serricorne F.)

Nebraska. M. H. Swenk (October 20): The cigarette beetle or tow-bug was reported to be found all through a house in Douglas County on September 23, while on October 18 this pest was infesting overstuffed furniture in Jefferson County.

CONFUSED FLOUR BEETLE (Tribolium confusum Duv.)

Iowa. H. E. Jaques (October 18): Complaints of the confused flour beetle as a pest of local flour bins have been received from Mt. Pleasant.

PEA WEEVIL (Bruchus pisorum L.)

Iowa. H. E. Jaques (October 18): Pea weevils have been reported with their usual destruction to garden peas.

A LATHRID (Cartodere costulata Reit.)

Connecticut. E. P. Felt (October 23): Was reported abundant in a Stamford dwelling to such an extent as to cause apprehension. They were sufficiently numerous on the walls that they were comparatively easy to capture. It developed that the house had been closed during a portion of the summer and was unusually damp and moldy.

INDIAN-MEAL MOTH (Plodia interpunctella Hbn.)

Iowa. H. E. Jaques (October 18): Has been making its appearance in homes and grocery stores where it is a pest in food products.

BOOKLOUSE (Troctes divinatorius Mull.)

New York. M. D. Leonard (October): Present in such great numbers over a period of several weeks this fall in apartments and dwellings in New York City as to elicit several newspaper accounts of the infestations.

INSECT CONDITIONS IN PUERTO RICO

By G. N. Wolcott

Insular Experiment Station, Rio Piedras

The past spring and summer in the more humid part of Puerto Rico has been unusually dry, and the autumnal rains have been less than normal. The chinch bug (Blissus leucopterus Say) was noted in considerable abundance on the upper leaves of young sugarcane plants at Rio Grande and Canovanas a few days ago, something I have never seen before.

An outbreak of the pyralid caterpillar, Pyrausta cerata F. (= Epicorsia mellinalis Hbn.) on the leaves of the pendula tree, Citharexylum fruticosum, has recently been noted at Humacao, Maunabo, and Arroyo, in the southeastern corner of the island, and also at Bayamon, Cayey, and Caguas in the interior, and at Isabela and Aguadilla in the northwestern corner, presumably being general wherever the host tree is present.

INSECT CONDITIONS IN GUAM -- JULY AND AUGUST 1937

By R. G. Oakley

Agana, Guam

The attacks of the melonfly (Bactrocera cucurbitae Coq.) probably of recent introduction into Guam, were general in most community centers and in a few isolated cucurbit fields during July. Infestations reached as high as 100 percent in some cases. The prevalence of wild papayas over the island and a local cultivation practice of often abandoning cucurbit fields to weedy growth and the development of small melons after the commercial crop is picked, is very favorable to the development of a large population.

The bean leaf roller (Lamprosema diemenalis Guen.) was very abundant on string beans and as a minor pest on other legumes in July. It was not uncommon to find 50 percent of the leaf surface of string beans infested. (Det. by O. H. Swezey.)

A squash bug, Leptoglossus membranaceus F., commonly infesting a number of hosts, was doing considerable damage to cucurbits and string beans in July and August. In one field dozens of bursted watermelons were completely covered

and hundreds were feeding heavily on papaya seedlings. (Det. by H. G. Barber.)

The chrysomelid Phytorus pinguis Baly. has been observed to be the most prolific insect every to have been seen by the writer. Its attacks are especially severe on breadfruit and mango, the latter being often defoliated. Four wild hosts are also heavily infested and a number of others seem to be satisfactory hosts. It is sometimes found doing minor damage to vegetable crops. No immature stages have been found as yet. (Det. by O. H. Swezey.)

